

WHAT IS CLAIMED IS:

1. A switch for switching incoming combined data and dialed digits packets,
comprising:

5 a separator for recognizing and distinguishing between said data and
dialed digits packets;

 a router for routing said data packets to a packet switched network and
said dialed digits packets to a telephone network;

 wherein said separator and said router are integrated in a hardware
10 platform and controlled by a common program.

2. The switch of claim 1 wherein said program is a module of software running on a
single CPU within said switch.

3. The switch of claim 1 further comprising a converter for translating said dialed
digits packets from AAL2 protocol to SS7/IMT protocol.

- 15 4. The switch of claim 3 wherein said converter is within said single hardware
platform.

5. The switch of claim 4 wherein said converter is an integral part of said router.

6. The switch of claim 3 wherein said incoming dialed digits packets are in said
AAL2 protocol.

- 20 7. The switch of claim 3 further comprising means for utilizing said SS7/IMT
protocol to interface said telephone network.

8. The switch of claim 1 wherein said separator is capable of separating voice
packets from said data packets and said dialed digits packets.

9. The switch of claim 7 wherein said router is capable of routing said voice packets to said telephone network.

10. The switch of claim 3 wherein said converter is also capable of translating voice packets from said AAL2 protocol to said SS7/IMT protocol.

5 11. A method of switching combined data and dialed digits packets, comprising:

receiving at a switch said combined data and dialed digits

packets;

separating between said data packets and said dialed digits packets;

routing said data packets to a data network and said dialed digits packets

10 to a public switched telephone network using signaling unique to said telephone network;

wherein said steps of separating and routing are carried out by a common program running on a CPU within said switch.

12. The method of claim 11 further comprising a step of translating said dialed digits
15 packets from AAL2 protocol into SS7/IMT protocol.

13. The method of claim 12 wherein said step of translating is carried out by said common program.

14. The method of claim 13 wherein said step of translating is carried out within said switch such that said dialed digits packet come out from said switch as being of
20 SS7/IMT protocol.

15. A method of transmitting dialed tone signaling over a network, comprising the steps of:

packetizing said dialed tone signaling into dialed digits packets;

multiplexing said dialed digits packets with data packets to form a combined packet stream and transmitting said stream to an integrated switch;

separating said dialed digits packets from said combined packet stream and routing them towards PSTN;

5 within said integrated switch, translating said dialed digits packets into signaling of a protocol that is capable of interfacing PSTN;

wherein said steps of separating, routing and translating are all implemented by a single hardware platform.

10 16. The method of claim 15 wherein said steps of separating, routing and translating are all controlled by a single software module running on a CPU within said integrated switch.

17. The method of claim 15 further comprising a step of routing said data packets to a packet data network.

15 18. The method of claim 15 wherein said protocol capable of interfacing said PSTN is a SS7/IMT protocol.

19. The method of claim 18 wherein said dialed digits packets are in AAL2 protocol.